



孕龍科技股份有限公司
ZeroPlus Technology Co., Ltd.

SPECIFICATION

MODEL: B09006-LAP-SD2.0/SDIO-M

PART NO: _____

VERSION: V1.63

Approver		Check	Design
GM	PM		

Customer Confirm

*Please fax the file to ZeroPlus Technology after signing.

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1 Software Download

Please download the software as the following steps:

Remark: We won't have additional notice for you, when there is any modification of the module specification. If there is some unconformity caused by the module version upgrade, users should take the module software as the standard.

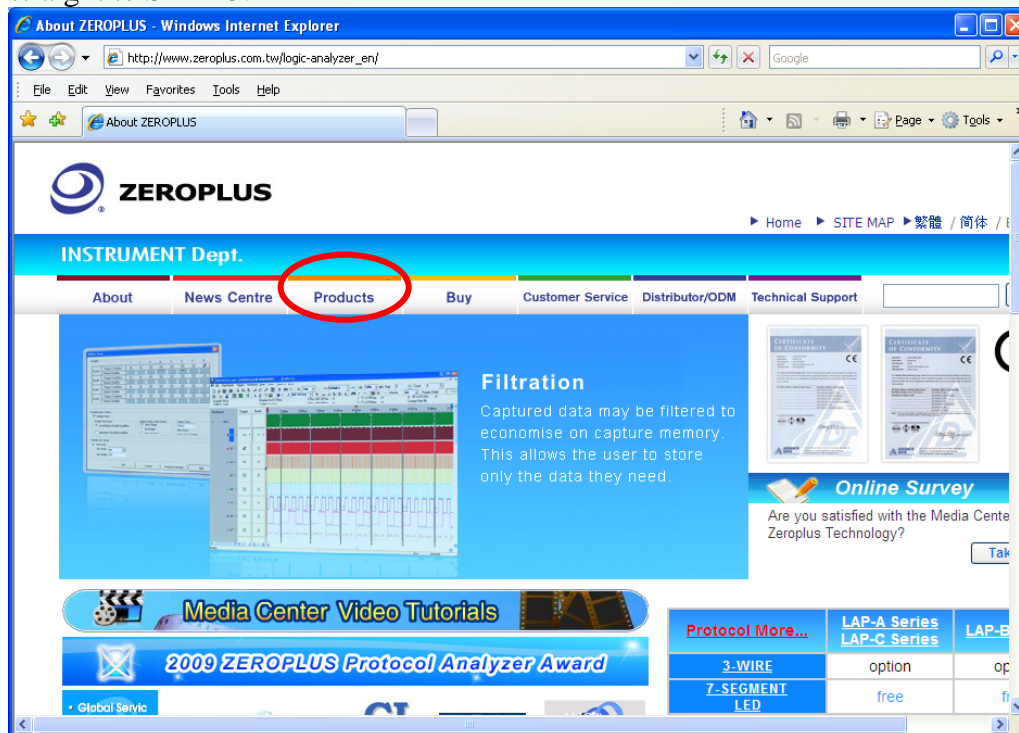
STEP 1. Visit the website of ZeroPlus: <http://www.zeroplus.com.tw>.

STEP 2. Click the **English** in the Instrument Division part on the Homepage.

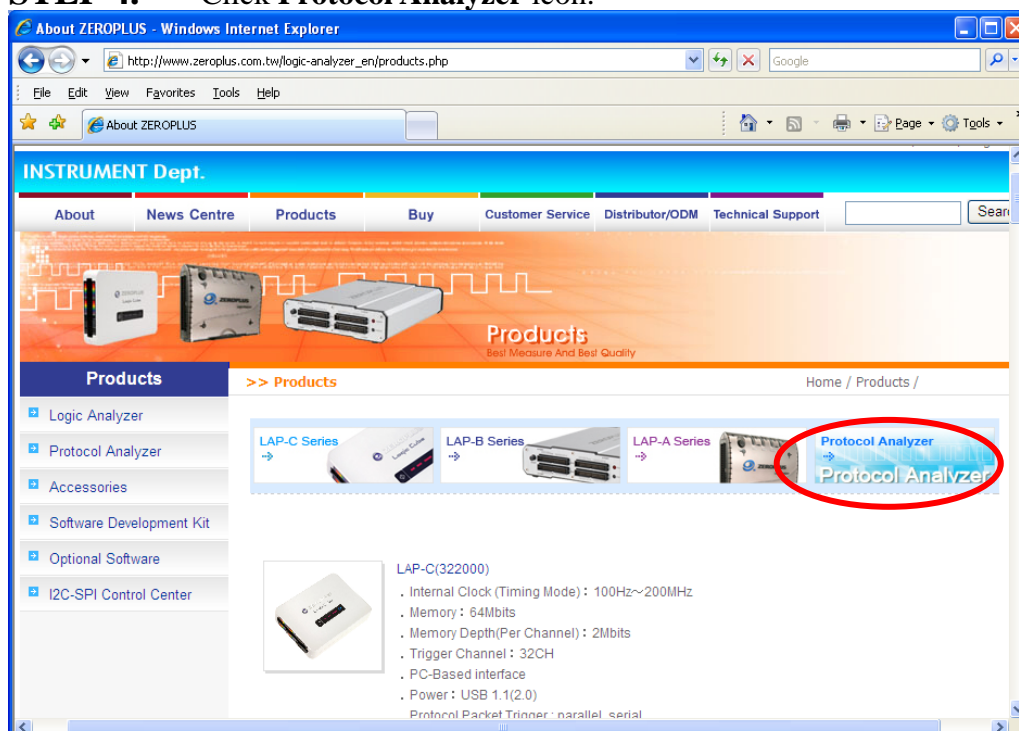




STEP 3. Click **Products** menu or select **Protocol Analyzer** item from its pull-down menu to go straight to STEP 5.

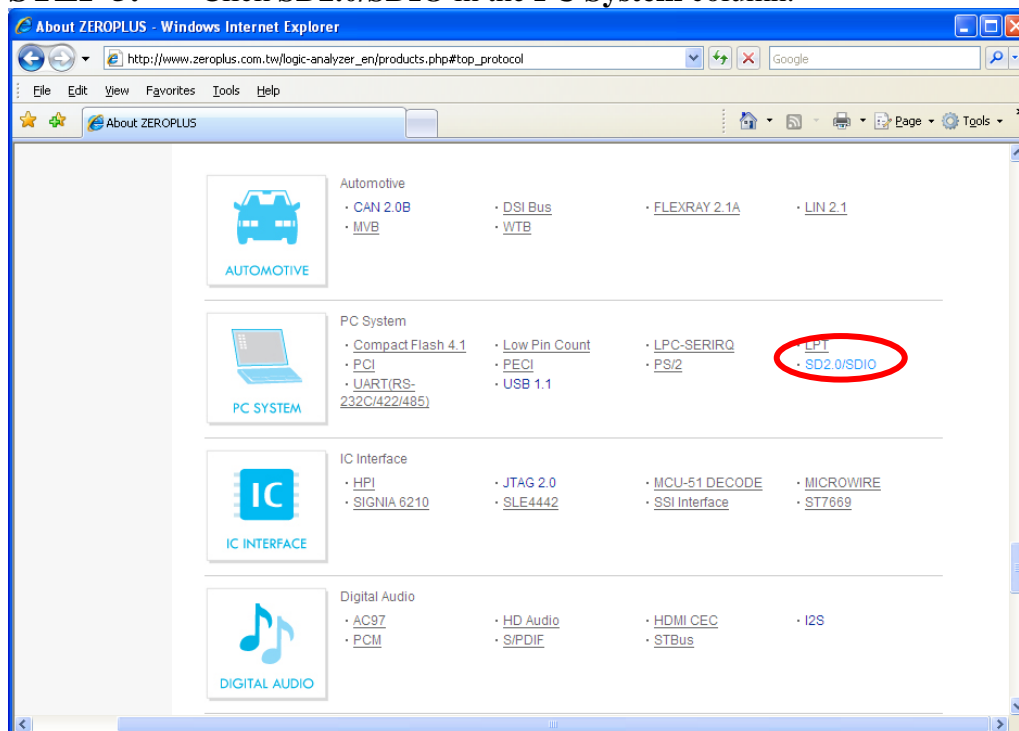


STEP 4. Click **Protocol Analyzer** icon.

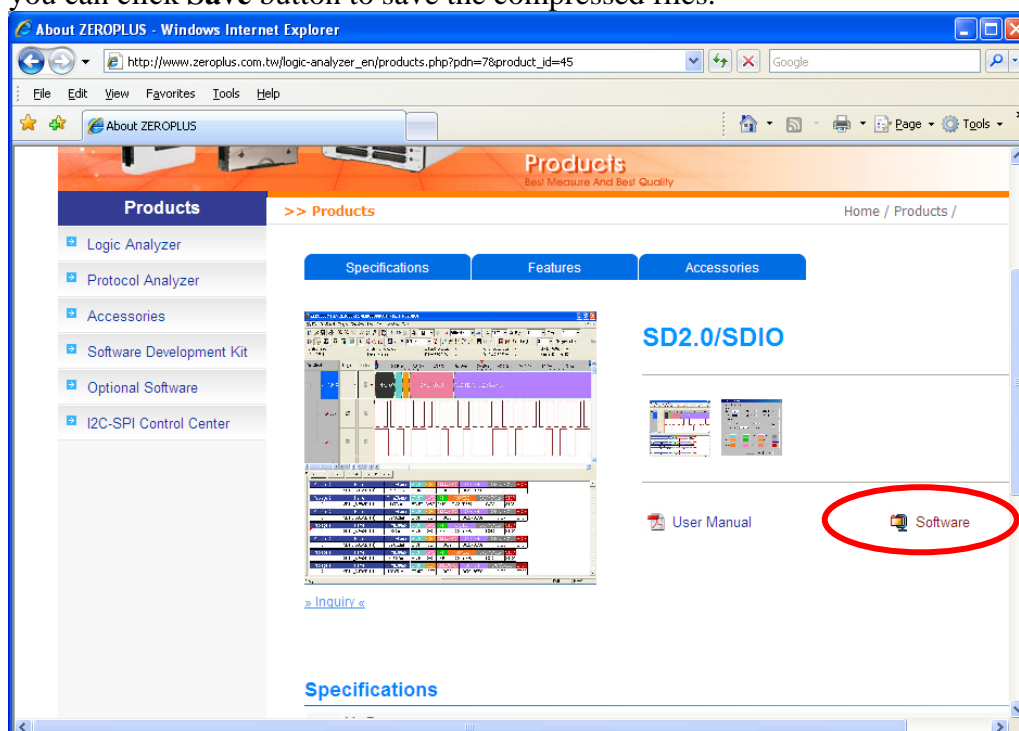




STEP 5. Click **SD2.0/SDIO** in the **PC System** column.



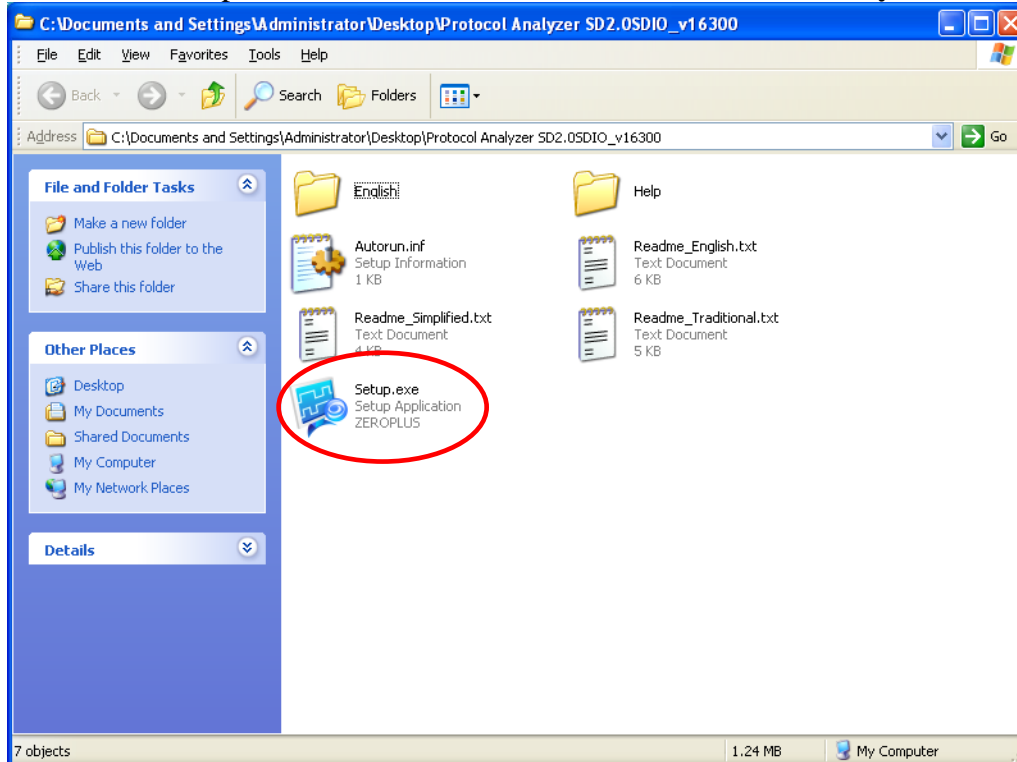
STEP 6. Click **Software** in the Products page. When the File Download dialog box appears, you can click **Save** button to save the compressed files.



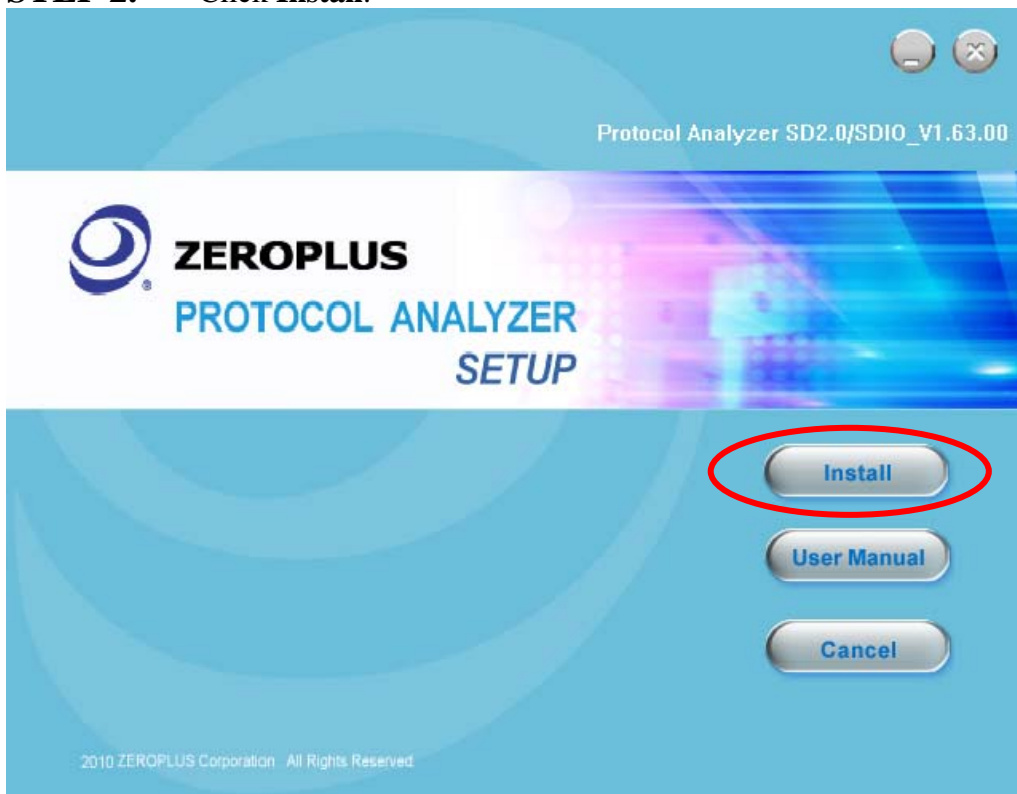


2 Software Installation

STEP 1. Open the downloaded folder to install **Protocol Analyzer SD2.0/SDIO**.

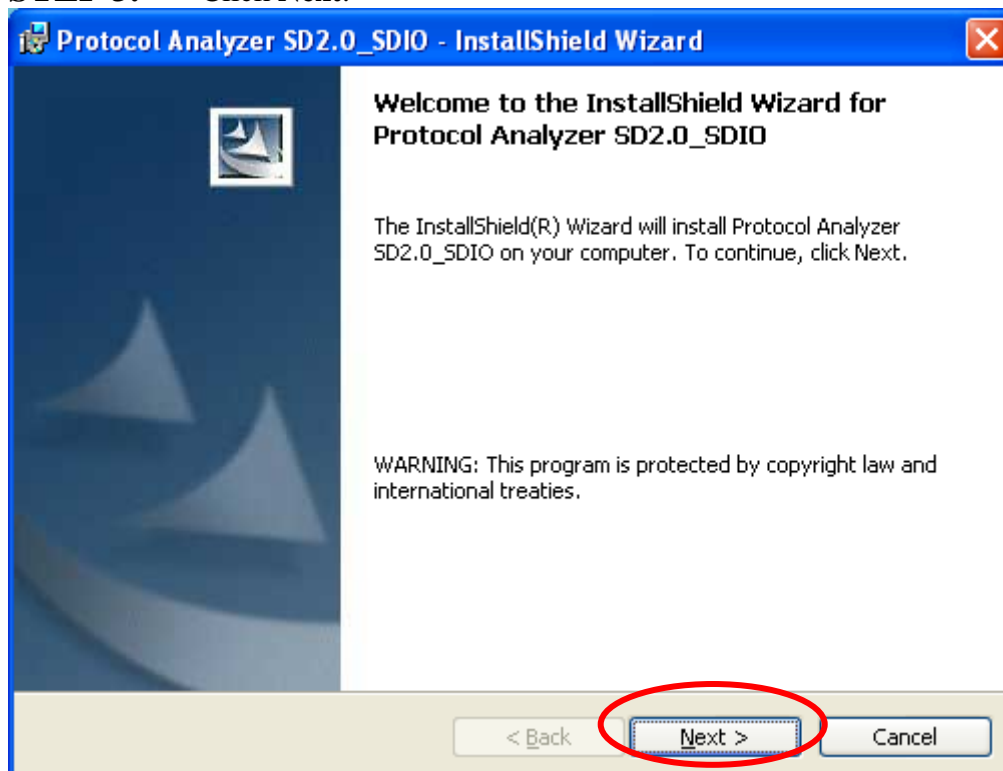


STEP 2. Click **Install**.

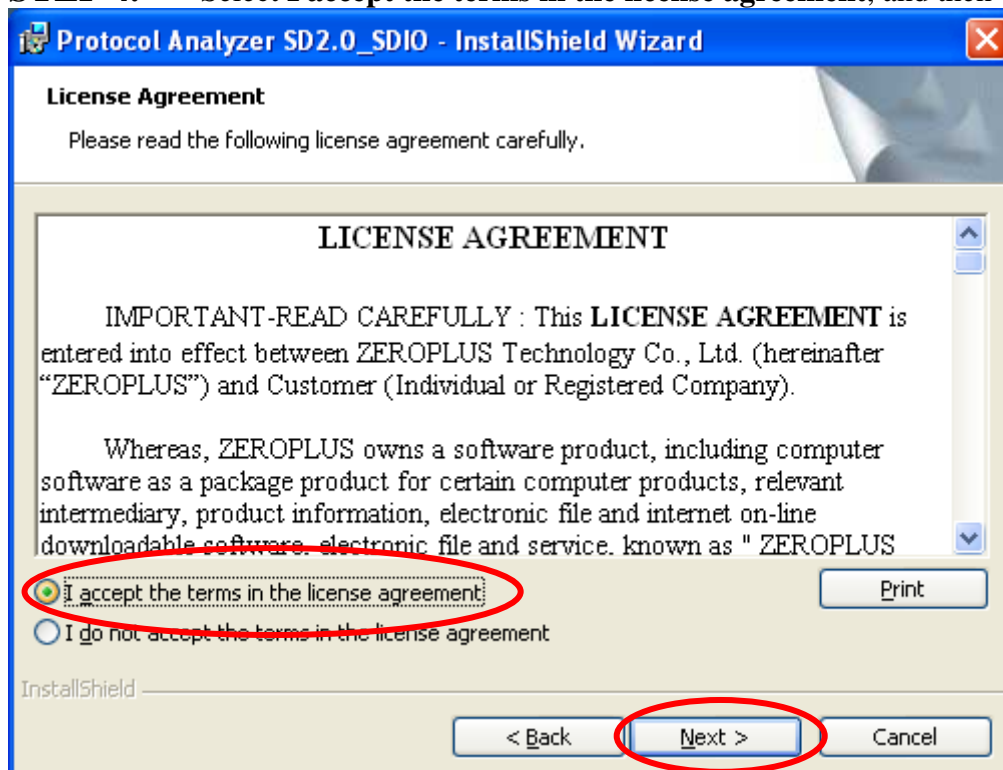




STEP 3. Click **Next**.



STEP 4. Select **I accept the terms in the license agreement**, and then click **Next**.





STEP 5. Fill in users' information, and then click **Next**.

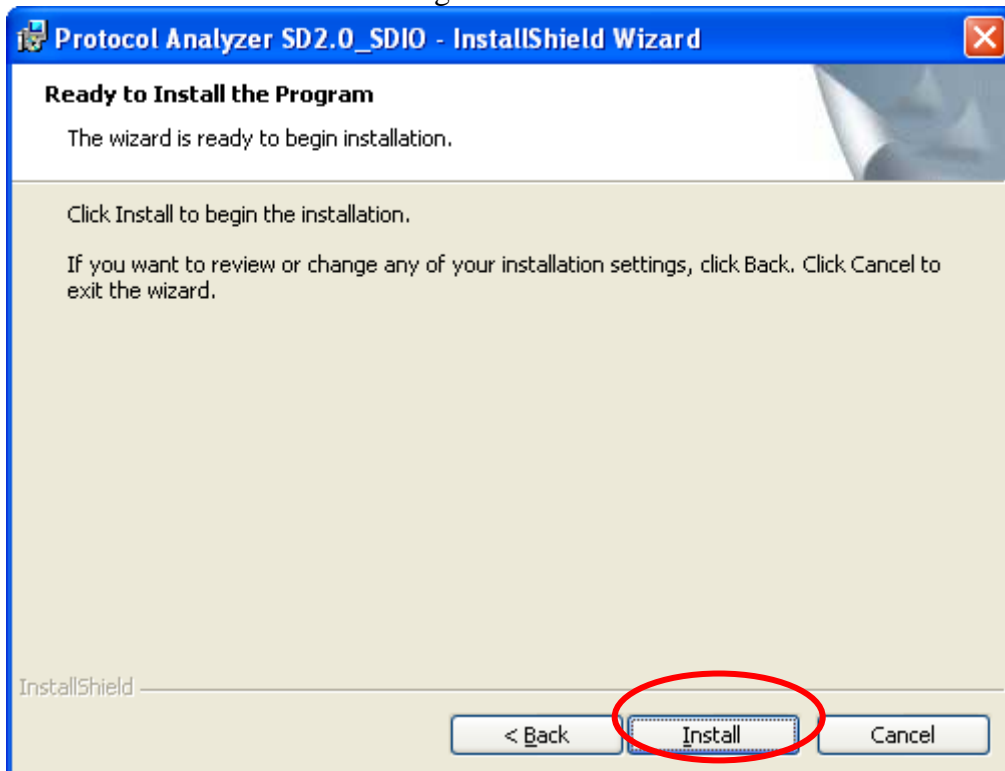
The screenshot shows the 'Customer Information' screen of the 'Protocol Analyzer SD2.0_SDIO - InstallShield Wizard'. The window title is 'Protocol Analyzer SD2.0_SDIO - InstallShield Wizard'. The main heading is 'Customer Information' with the instruction 'Please enter your information.' Below this, there are two text input fields: 'User Name:' with the value 'kelly' and 'Organization:' with the value 'ZeroPlus'. Under the heading 'Install this application for:', there are two radio button options: 'Anyone who uses this computer (all users)' (which is selected) and 'Only for me (kelly)'. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is circled in red.

STEP 6. Select **Complete** option and then click **Next**.

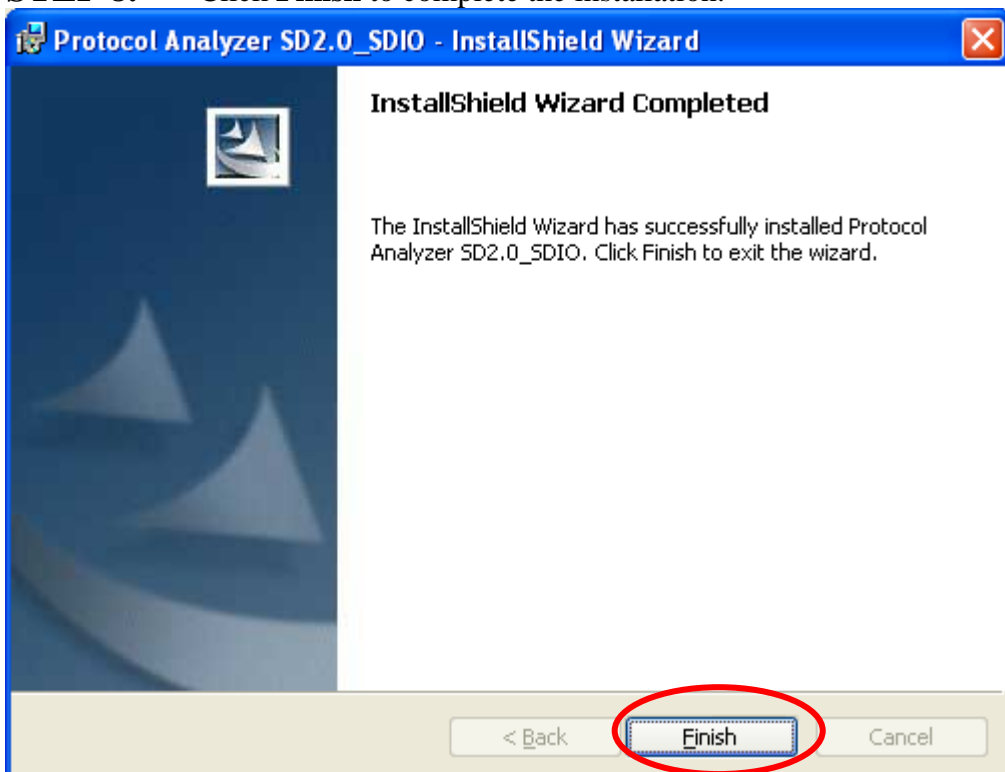
The screenshot shows the 'Setup Type' screen of the 'Protocol Analyzer SD2.0_SDIO - InstallShield Wizard'. The window title is 'Protocol Analyzer SD2.0_SDIO - InstallShield Wizard'. The main heading is 'Setup Type' with the instruction 'Choose the setup type that best suits your needs.' Below this, there is a text prompt 'Please select a setup type.' and two radio button options: 'Complete' (which is selected) and 'Custom'. Each option has a small icon and a description. The 'Complete' option description is 'All program features will be installed. (Requires the most disk space.)'. The 'Custom' option description is 'Choose which program features you want installed and where they will be installed. Recommended for advanced users.' At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is circled in red.



STEP 7. Click **Install** to begin the installation.

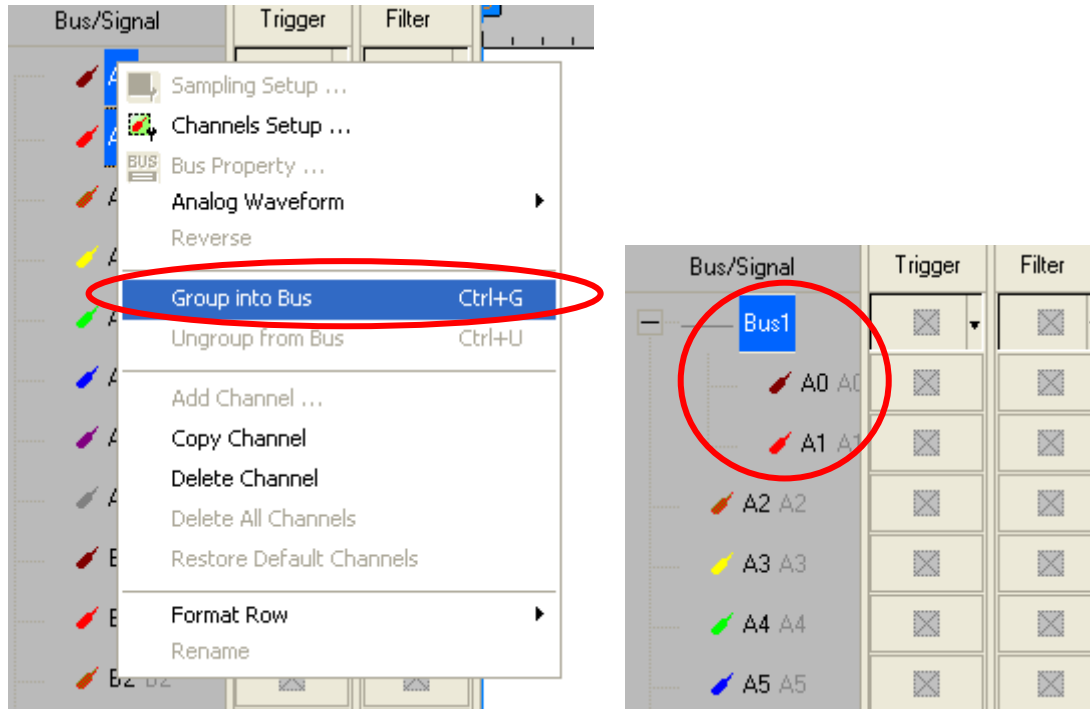


STEP 8. Click **Finish** to complete the installation.

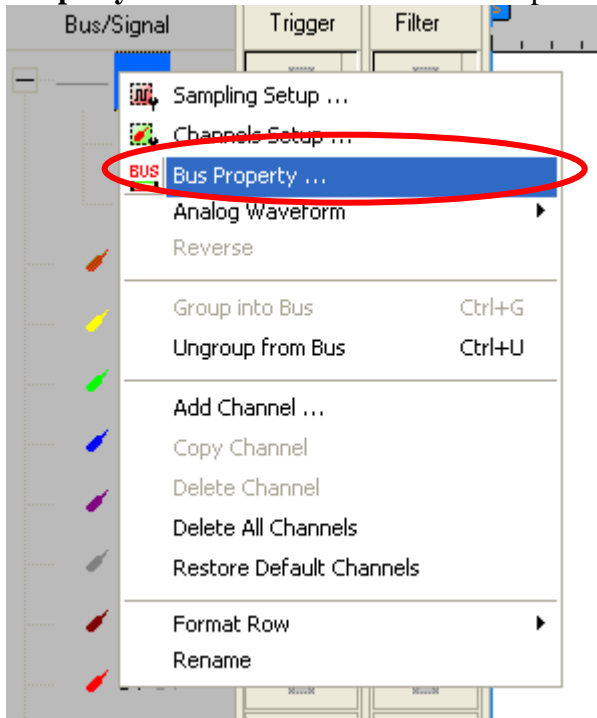


3 Software Register

STEP 1. Group the unanalyzed channels into **Bus1** by pressing the **Right Key** on the mouse. SD2.0/SDIO needs two or more channels to decode signals, so it is necessary to group two or more channels into a Bus.

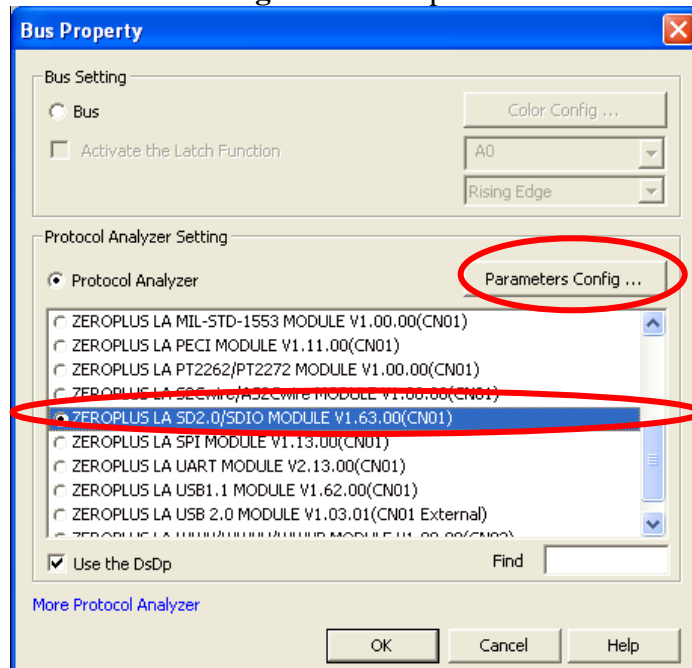


STEP 2. Select **Bus1**, then press **Right Key** on the mouse to list the menu, next press **Bus Property** or **Bus** icon on the toolbar to open **Bus Property** dialog box.

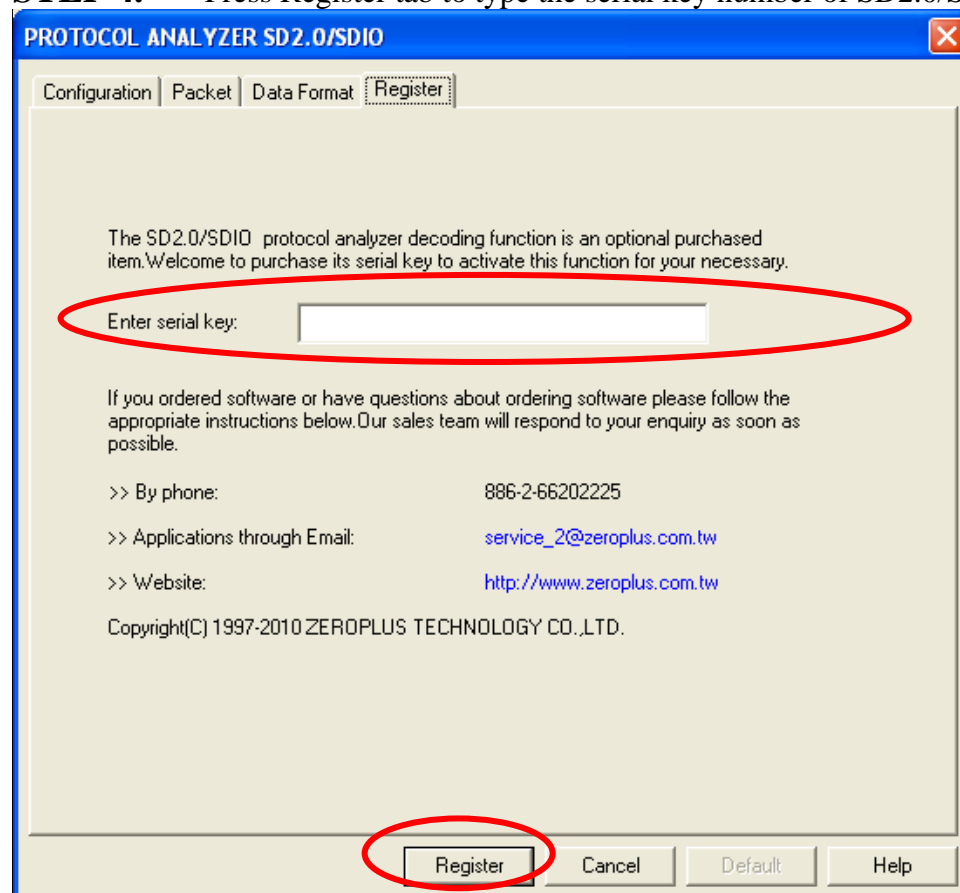




STEP 3. For Protocol Analyzer SD2.0/SDIO Parameters Configuration, select Protocol Analyzer, and then choose **ZEROPLUS LA SD2.0/SDIO MODULE V1.63.00(CN01)**. Next click **Parameters Configuration** to open the **PROTOCOL ANALYZER SD2.0/SDIO** dialog box.

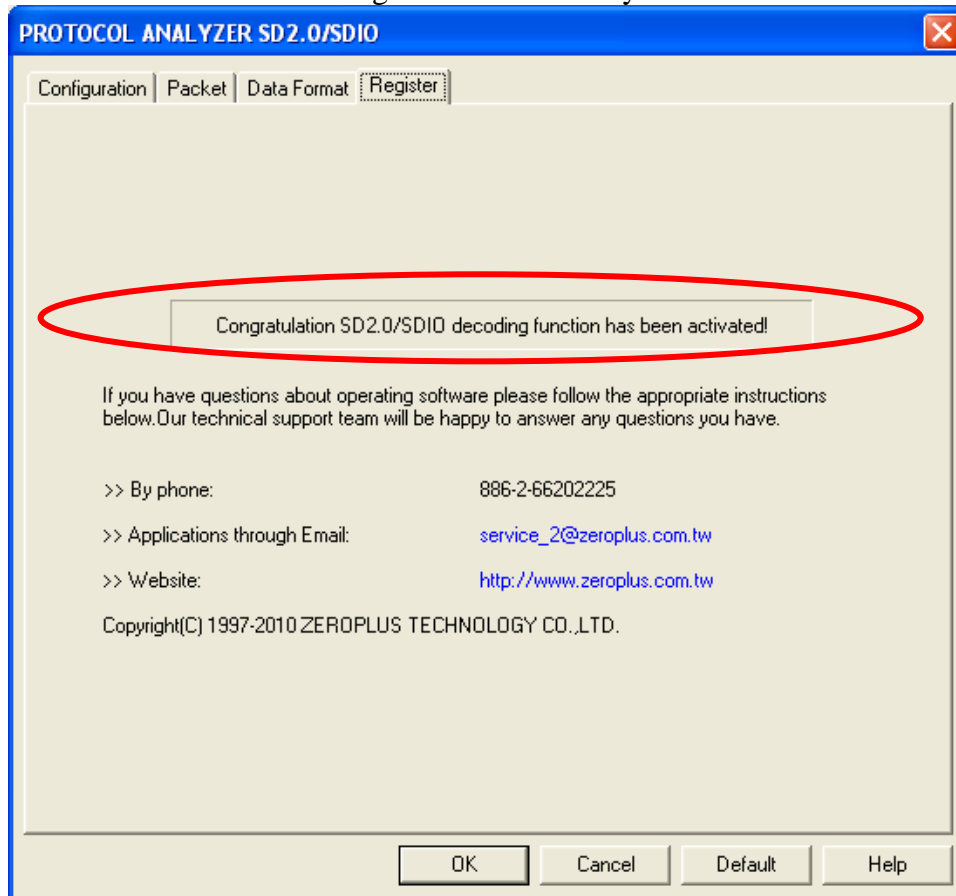


STEP 4. Press Register tab to type the serial key number of SD2.0/SDIO. Then, press **Register**.





STEP 5. After pressing the Register button, the following dialog box will appear; it denotes that the SD2.0/SDIO has been registered successfully.

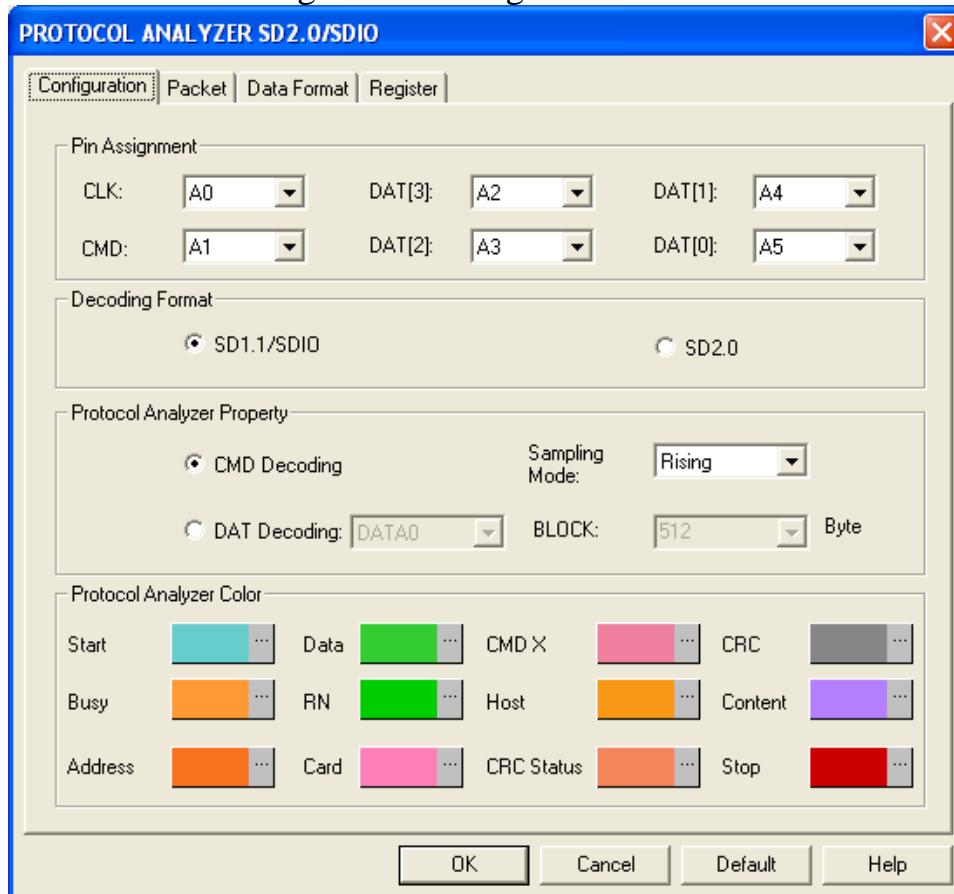




4 User Interface

Please refer to the below images to select options of setting **SD2.0/SDIO** Module.

SD2.0/SDIO Configuration dialog box



Pin Assignment:

The CLK is the Clock channel, the CMD is the Command channel and the DAT [0] ~ [3] are the Data channels.

Decoding Format:

There are two modes (SD 1.1/SDIO and SD 2.0) for selecting.

Protocol Analyzer Property:

CMD Decoding: It is used to decode the Command and Response only.

DAT Decoding: It is used to decode the transmitted data only. Two options can be chosen, DATA0 or DATA0~3.

BLOCK: Users can vary the BLOCK Size on SD2.0/SDIO card. The options are 512 Byte, 1024 Byte and 2048 Byte. And the BLOCK Size can be entered directly in the range from 1Byte to 32767 Byte.

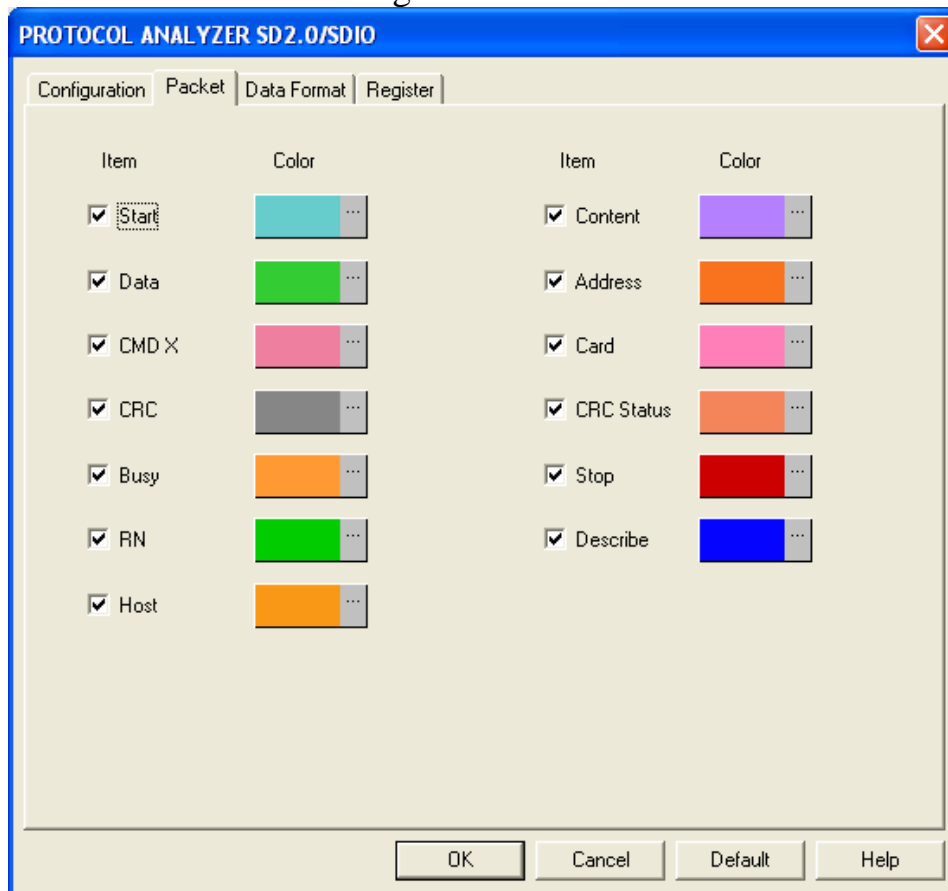
Sampling Mode: Users can set the CLK sampling mode to Rising or Falling.

Protocol Analyzer Color:

The protocol analyzer color can be varied by users.



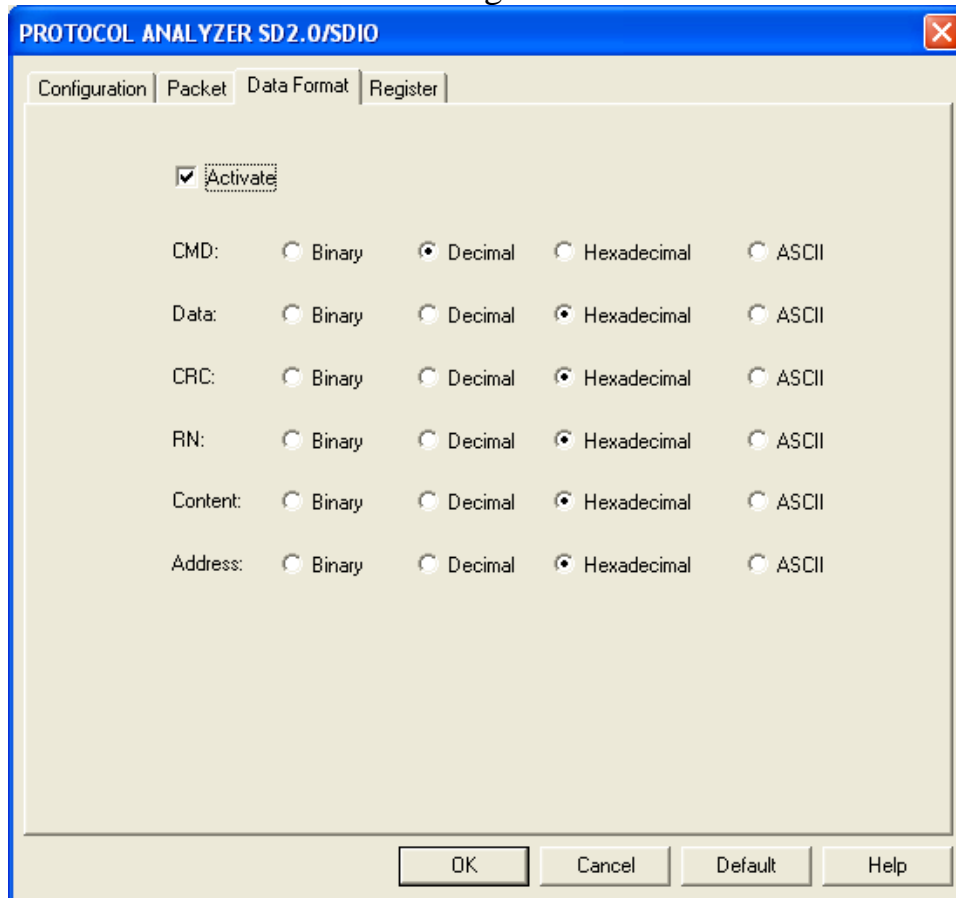
SD2.0/SDIO Packet dialog box



In the Packet dialog box, users can set the item to be displayed and the color of items.



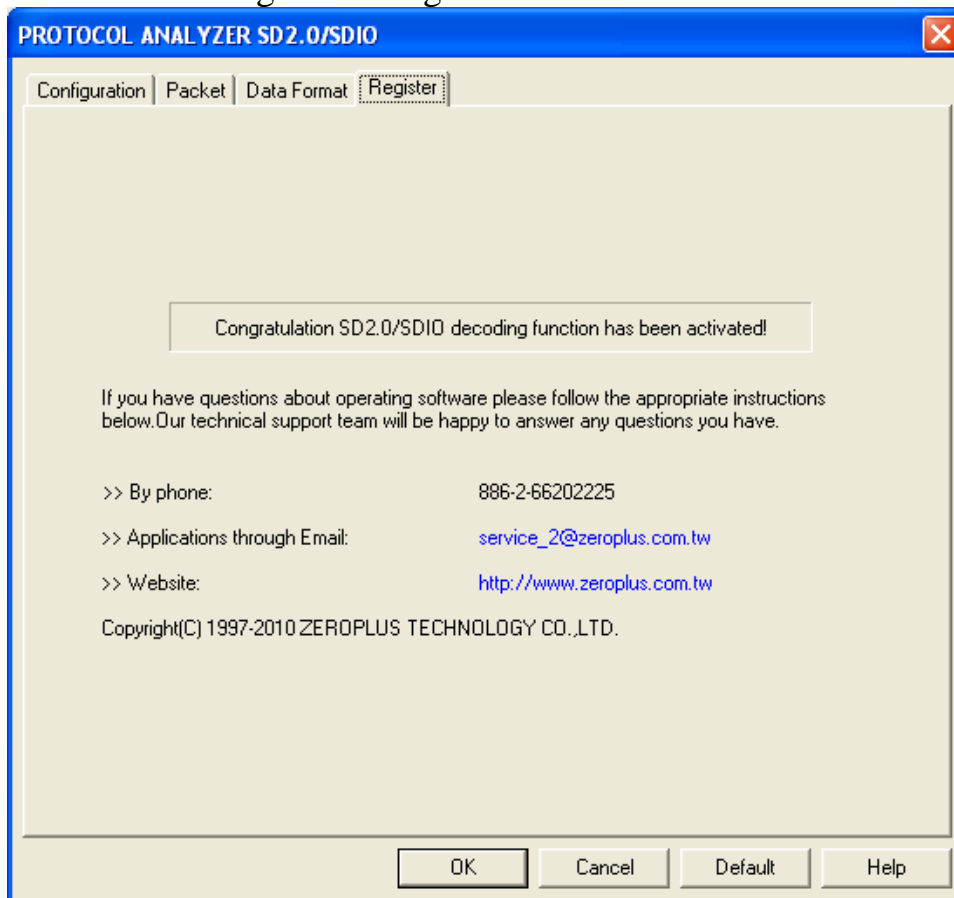
SD2.0/SDIO Data Format dialog box



Click the option, **Activate**, to activate the Data Format function. The default data format of CMD is Decimal and the default data formats of the items (Data, CRC, RN, Content and Address) are Hexadecimal; users can also set the data format as their requirements. The data formats of the CMD and the items (Data, CRC, RN, Content and Address) in the Waveform Area and the Packet List can be controlled by the Protocol Analyzer. The default is non-activated, and then the data formats of the CMD and the items (Data, CRC, RN, Content and Address) will be controlled by the Main Program.



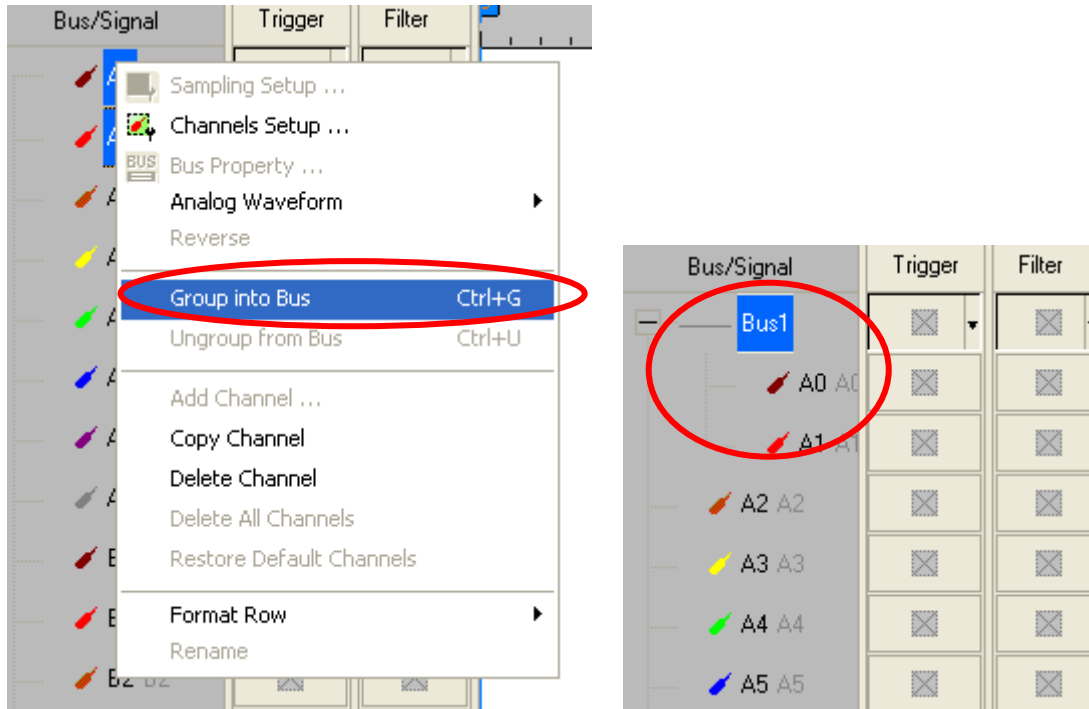
SD2.0/SDIO Register dialog box



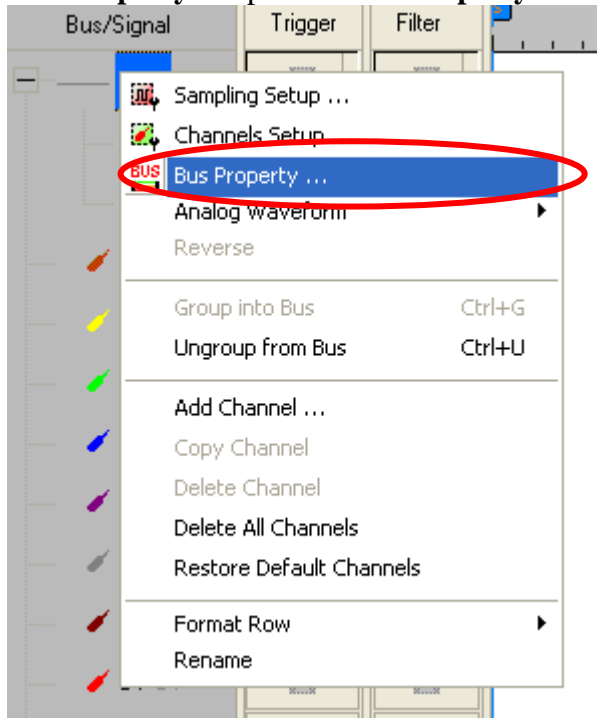
There is ZeroPlus company information. If you have any questions about software operations, you can contact ZeroPlus by Telephone or Email.

5 Operating Instructions

STEP 1. Group the unanalyzed channels into **Bus1** by pressing the **Right Key** on the Mouse. SD2.0/SDIO needs two or more channels to decode signals, so it is necessary to group two or more channels into a Bus.

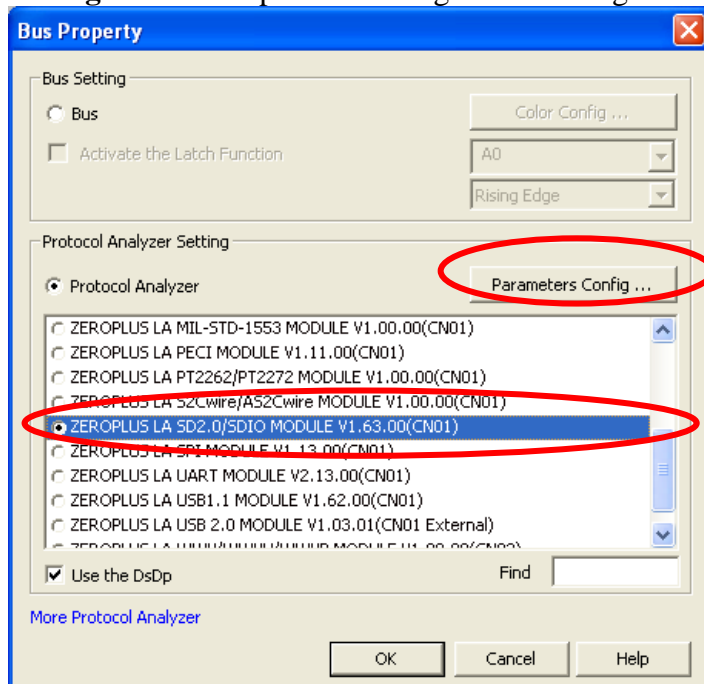


STEP 2. Select **Bus1**, then, press the **Right Key** on the mouse to list the menu, next click **Bus Property** to open the **Bus Property** dialog box.

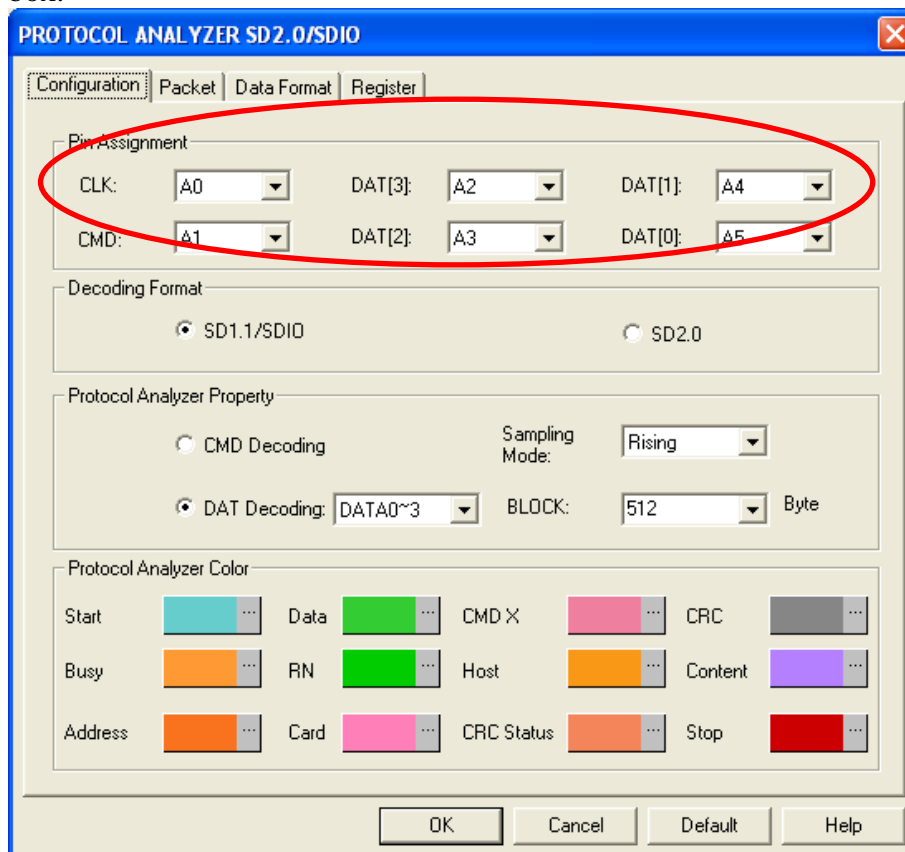




STEP 3. For Protocol Analyzer Parameters Configuration, select Protocol Analyzer, then choose **ZEROPLUS LA SD2.0/SDIO MODULE V1.63.00(CN01)**. Next click **Parameters Configuration** to open the Configuration dialog box.

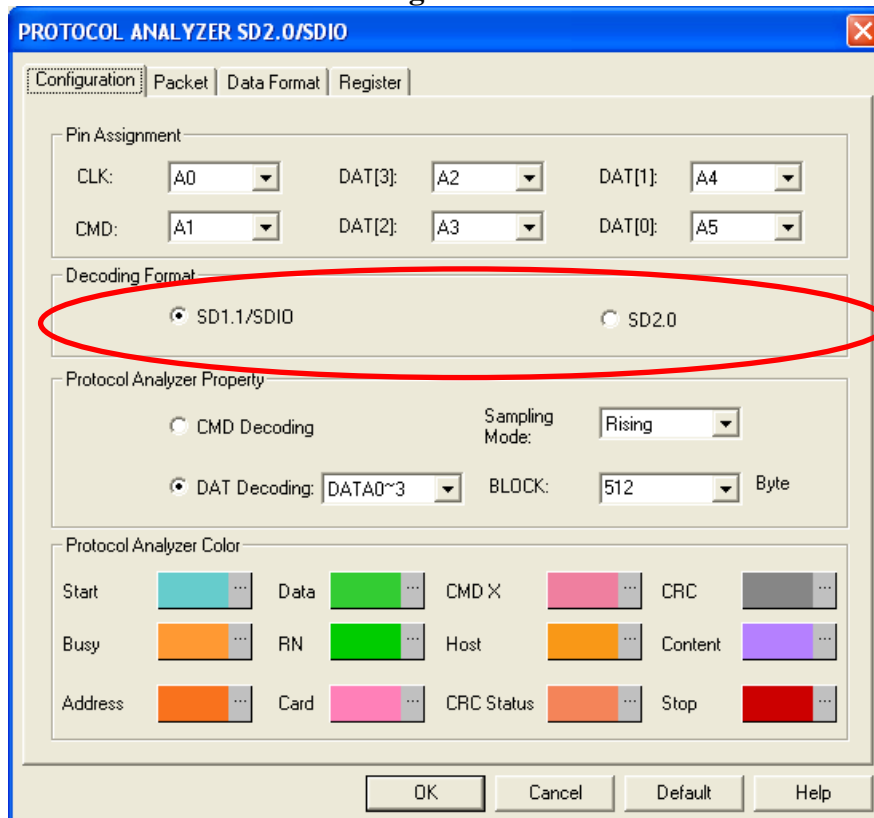


STEP 4. Set the channels of **CLK**, **CMD** and **DAT [0]~[3]** in the Configuration dialog box.

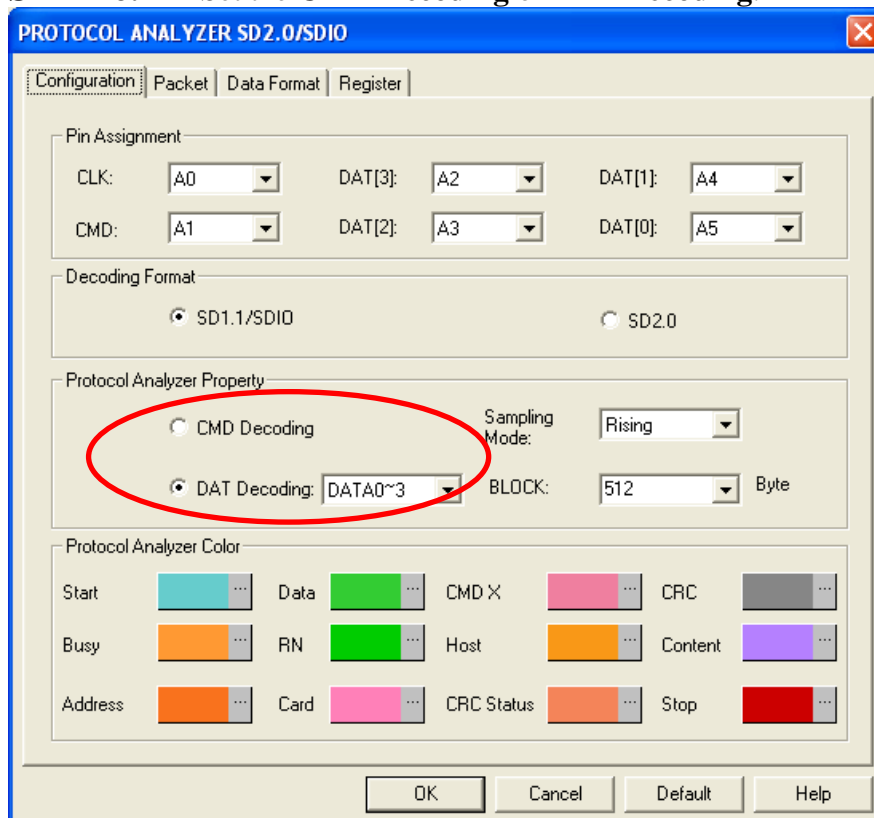




STEP 5. Set the **Decoding Format** to SD 1.1/SDIO or SD 2.0.

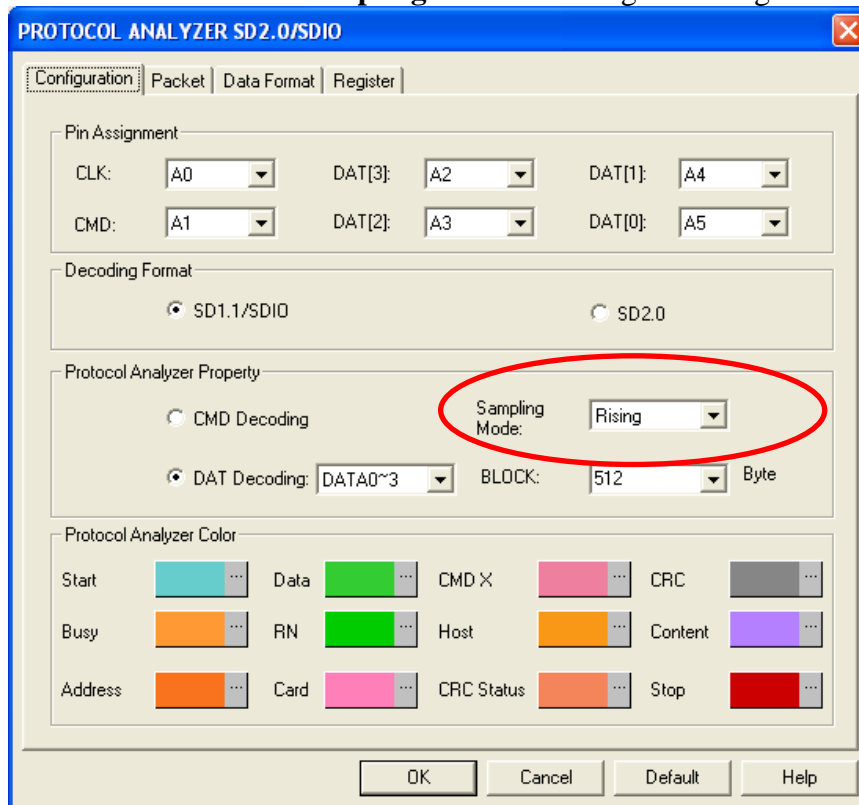


STEP 6. Set the **CMD Decoding** or **DAT Decoding**.

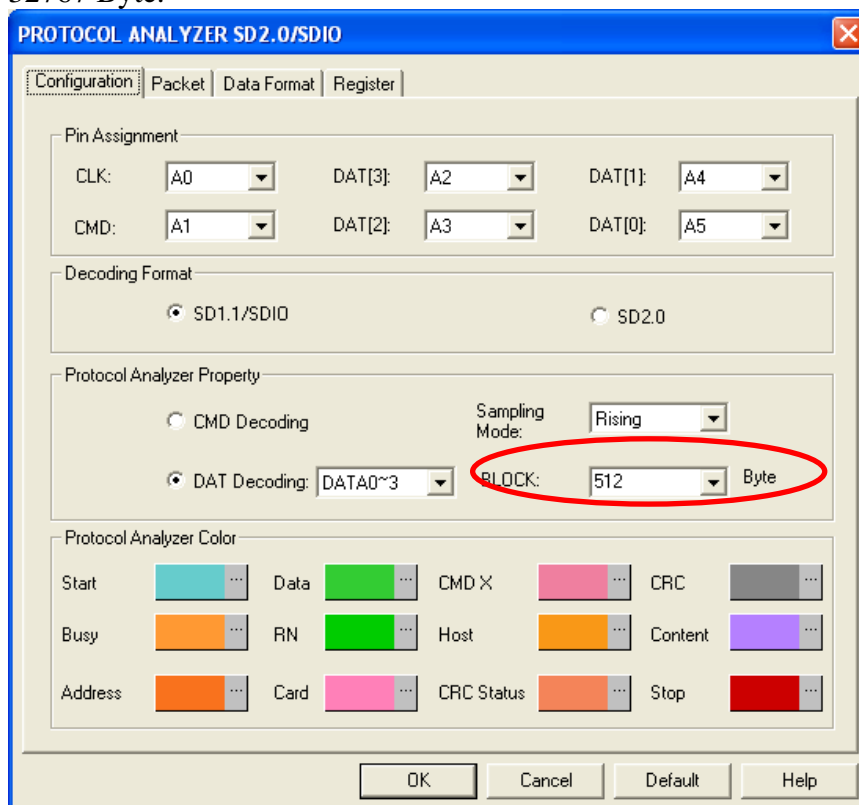




STEP 7. Set the **Sampling Mode** to Rising or Falling.

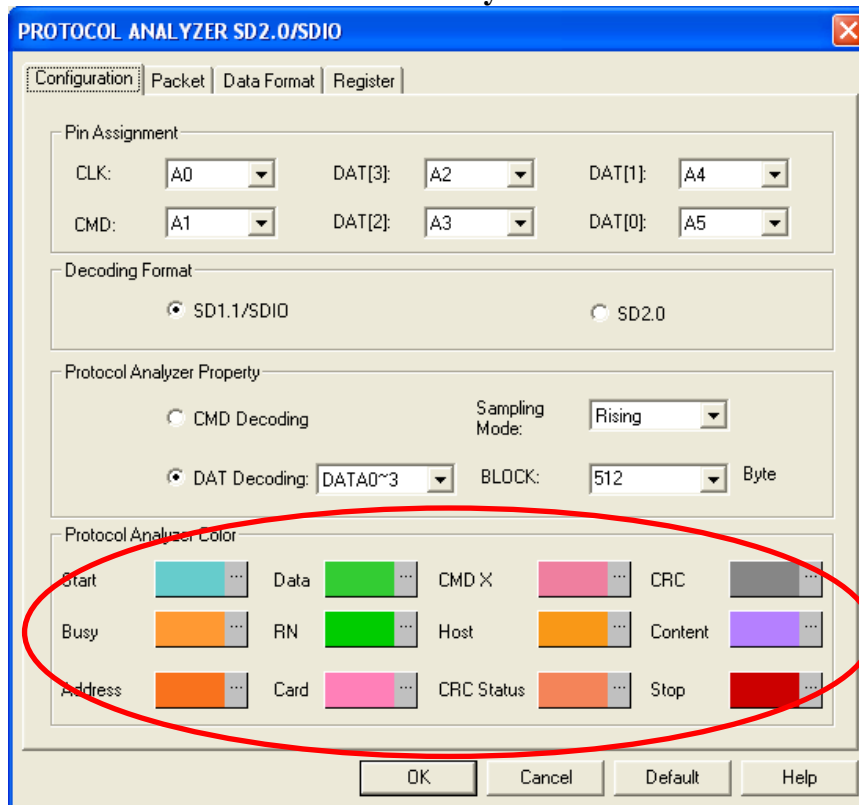


STEP 8. Select the **DAT Decoding** to set the **BLOCK** Size in the range from 1 Byte to 32767 Byte.



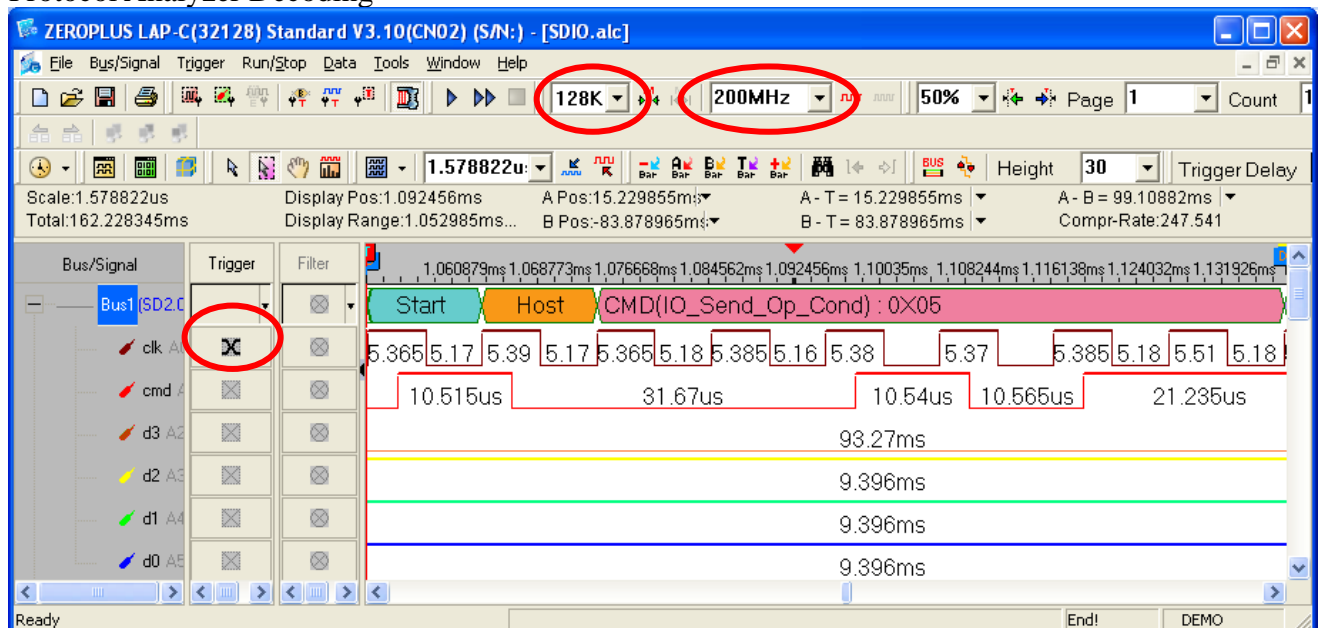


STEP 9. Set the Protocol Analyzer Color.



STEP 10. Following pictures show the completion of the protocol analyzer decoding and the packet list. The trigger condition is set as Either Edge; the memory depth is 128K; the sampling frequency is 200MHz (the sampling frequency should be more than four times higher than the signal to be tested).

Protocol Analyzer Decoding





Packet List

